

IN THE CLAIMS:

Please cancel claims 1-18 and add new claims 19-36, as follows:

Claims 1-18 (canceled).

19. (new): A device for treating the surface of containers with a plasma, comprising a kinematic system for the transport of the containers and a plurality of plasma generators operating at atmospheric pressure, each generator adapted to treat one container at a time, the plasma generator comprising a treatment gas supply system and an electrical power supply system comprising at least one interrupter transistor functioning as an interrupter, or an LC adapter, adapted for supplying current in pulses.

20. (new): A device according to claim 19, wherein each generator is provided as a column having a diameter or a width close to or slightly greater than the diameter or the width of a container.

21. (new): A device according to claim 19, wherein the power supply system includes or is connected to a control unit adapted to control the amplitude of the pulses of electric current, the slope of the leading edge of these pulses, their frequency and the time elapsed between two successive pulses.

22. (new): A device according to claim 19, wherein the plasma generators are placed side by side on a carousel of the kinematic system.

23. (new): A device according to claim 19, wherein the kinematic system comprises an accumulation zone for grouping the containers and in that a plurality of generators are positioned above this system for a batch treatment of containers.

24. (new): A device according to claim 19, wherein the power supply system comprises a current source and the gas supply system comprises a gas distributor.

25. (new): A device according to claim 24, wherein the current source, the gas distributor, and a control unit comprising a microcontroller, are controllable so as to provide a plasma treatment program for each container, individually.

26. (new): A device according to claim 24, wherein the current source, the gas distributor and the microcontroller are provided in the same housing or as blocks above the container to be treated.

27. (new): A device according to claim 23, wherein the kinematic system comprises a pivoting guide for directing the loading of the containers in the accumulation zone.

28. (new): A device according to claim 19, wherein a treatment zone of the kinematic system comprises rows for storing rows of said containers in such a manner that the treatment of the containers is carried out therein row by row, as and when the rows are filled with containers.

29. (new): A device according to claim 23, further comprising at least two compartmented complementary zones upstream and downstream of the accumulation zone, which are used for, respectively, placing the containers in rows in the accumulation zone and discharging the containers from the accumulation zone.

30. (new): A device according to claim 19, wherein the power supply system comprises a central current source comprising a high frequency current generator producing high frequency electric pulses controlled by signals sent to a gate of a triode, the high frequency pulses being sent in parallel to each plasma generator to produce, via the LC adapters, a discharge in the form of a network of filaments in each container.

31. (new): A device according to claim 19, wherein the power supply system comprises a central high voltage bipolar direct current source supplying individual high speed and high voltage interrupter transistors of each plasma generator.

32. (new): A device according to claim 19, wherein the power supply system comprises a central high voltage unipolar direct current source supplying the generators, the generators being provided with bridges comprising two high speed and high voltage interrupter transistors adapted to create discharges in the form of a "network of filaments".

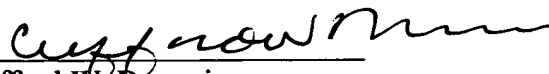
33. (new): A device according to claim 19, wherein the power supply system comprises a central high voltage direct current source supplying the plasma generators, the generators being provided with individual field transistor systems, each having a CR amplitude-phase circuit, with the signal being modulated by a computer, each of said individual field transistor systems supplying electricity for a discharge in the form of a "network of filaments" on the inner surface of the container to be treated.

34. (new): A device according to claim 30, wherein high power elements of a circuit of the high frequency current generator are cooled in such a manner as to function in a non-steady heat transfer state.

35. (new): A device according to claim 19, wherein the kinematic system comprises pneumatic transport channels (62) in which the containers are moved by an air stream, the pneumatic transport channels being movable in a plasma treatment zone (20) of the device, in order to enable the access of the generator electrodes (54a) to the containers.

36. (new): A device according to claim 21, wherein the control unit controls the execution of a program of distribution of gas portions to form the gaseous mixture constituting the treatment gas used in the plasma treatment of the containers.

Respectfully submitted,

By   
Clifford W. Browning  
Reg. No. 32,201  
Woodard, Emhardt et al. LLP  
Bank One Center/Tower  
111 Monument Circle, Suite 3700  
Indianapolis, IN 46204-5137  
(317) 634-3456  
browning@worldip.com

#308074